

FIELD ARCHAEOLOGY. EXCAVATIONS AND SURVEYS IN THE DIGITAL ERA: AN ASSESSMENT OF CUTTING EDGE TECHNIQUES FROM THE FIELD TO THE FINAL PUBLICATION, CONSERVATION AND VALORISATION

March 8-12 2022

François GILIGNY

Chair of Archaeological theories and methodology

UP1

lecture 8: publication issues

How to publish?

- The various media and publications following an operation:
 - excavation report
 - Book
 - Paper in a journal
 - Web-site and electronic media

8.1. The report

- « There exist a series of real and incommensurable transformations between the practices of digging in a trench and the drawing, recording and interpretation of a section, a disjunction between two very different material realities. “C Tilley « Excavation as theatre » Antiquity, 63, 1989, p. 275-280.

Research and administrative context

- The nature of the report depends on the research and administrative context. Each country and each institution may have its own rules to follow
- A report is both a scientific document but also an administrative document that must attest to the work done
- This document will be evaluated for its content & form (does it meet the standards of what was requested, including appendices with documentary inventories)
- Depending on usage, the document can be rendered in paper or digital form

Different operations, different reports

- Survey report (Field/geophysics/aerial survey)
- Evaluation/testpitting or trenching
- Excavation report
- Thematic project report
- Post-excavation/analysis report

Main chapters contents (1)

- **Cover page & administrative informations**

- Site name and location/site n° in the national archaeological Map
- Excavation licence number
- Site director & firm/institution
- Date of submission of the report
- dates of the project

- **Abstract:**

- Concise summary of the report.
- Key-words: occupation periods/type of features

- **Introduction:**

- Context of the project
- Purpose of the project and scientific project (research design)
- Detailed description of project location and schedule

- **context**

- environnement: detailed description of the geography, topography, geology with scale maps
- Actual land use and constraints for the excavation

- **Historical background**

- Synthesis of archaeological and historical record: former excavations, historical knowledge, extraction of the archaeological map, references

- **Methodology**

- Field techniques (survey, excavation)
- Recording system
- finds retrieval and sampling strategies
- analysis & datation
- Special issues (Bioarchaeology)

Main chapters contents (2)

The results

- Main Description of area excavated with overall plan showing all sub-areas, cuttings & trenches, excavated surfaces
- General chronology & stratigraphy, phases description.
- Full narrative description of the excavation including stratigraphic information, phasing, finds by contexts and interpretation.
 - the stratigraphic/chronological sequence must be described in chronological order. To illustrate with plans & sections, photographs
 - In case of many occupation periods, the developpement can be proposed for each period with features & find analysis and a short synthesis at the end
- Detailed description, assessment and illustration of the significant finds or categories of finds (by specialists)

1. Indicate the depths at which artifacts were encountered and their overall density across the site;
2. Include planview and profile drawings of identified features with the appropriate scale and legend. Discuss and describe identified feature types. Information on length, width, and depth may be presented in table format;
3. Artifact densities per unit and unit level should be presented, as well as distribution of artifact types per unit and unit level. Unit and feature descriptions should include total artifacts and artifact types recovered;

Main chapters contents (3)

- **Discussion and Conclusion**

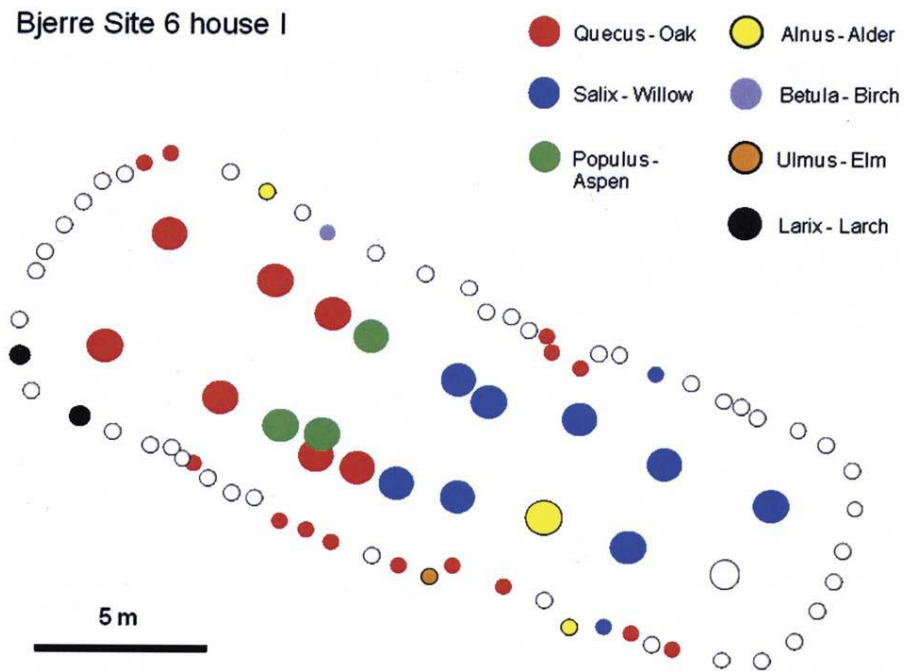
Interpretation of the results, significance, comparisons and contextualization.

- **References**

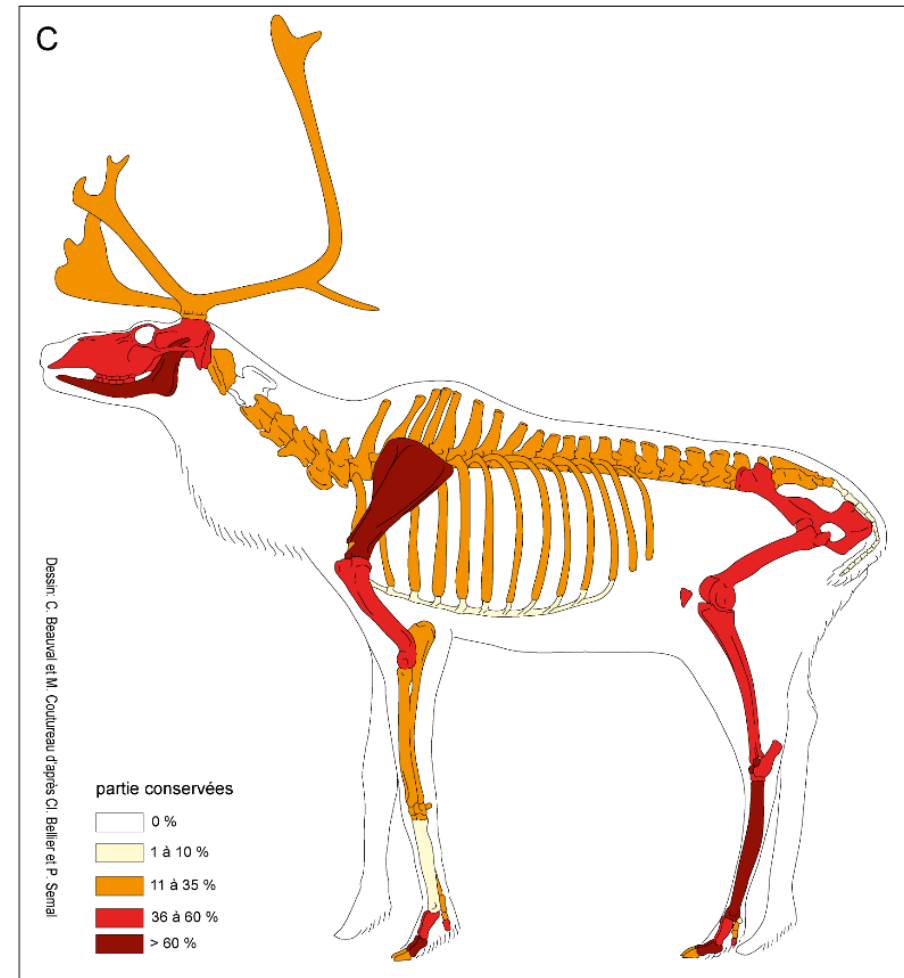
- **appendices/reports**

- Specialist/laboratory reports: reports on dating, soils, palaeo-environmental data, human remains, artefact/site conservation, etc.
- excavation records inventories (US, features)
- documentation inventories (maps, sections, photographs, 3D models)
- artefact inventories

Illustrations



Vector files & photographs of bones & skeletons :
<https://www.archeozoo.org/archeozootheque/>



Grégory Bayle et Céline Bemilli, Inrap

8.2. Final Publication: books and papers

Prepare the publication work

- Evaluate the work still to be achieved: is there is a need to study new data or to make new analysis after the project/excavation report. In preventive archaeology, only samples are analyzed for the report, there is perhaps a need to take larger samples or exhaustive data. Is there is a need to examine data and archives from ancient excavations?
- Constitute the team and obtain the commitments of the participants in the report
- Contact the service laboratories (dating, physico-chemical analyses, etc.)
- Draw up a specification and a schedule, in particular of specialists and their order of intervention
- Search an editor
- Prepare the budget and search for funds

The budget

- For a preventive excavation: the company who financed the search
- request for publication aid to different state organisms (Ministry of Culture, INRAP, in France)
- local and regional authorities
- Research organisations (universities, etc.)
- Patronage, fellowship, foundations etc.

The editor

- Choose the medium according to the objective and project interest: national or regional interest, thematic work, academic work, colloquium or round table proceedings
- Regional journals may include special issues or monograph series
- Assessing the publisher's ability to distribute the book and for marketing
- Negotiate the financial contribution: it may be more or less important
- Negotiate the print run and terms for the authors (number of free volumes and author's fee)
- Sign a contract that generally reserves the rights of reproduction or adaptation for other media (posting on the internet etc.)
NB: Royalties are generally null, unless working with a commercial publisher

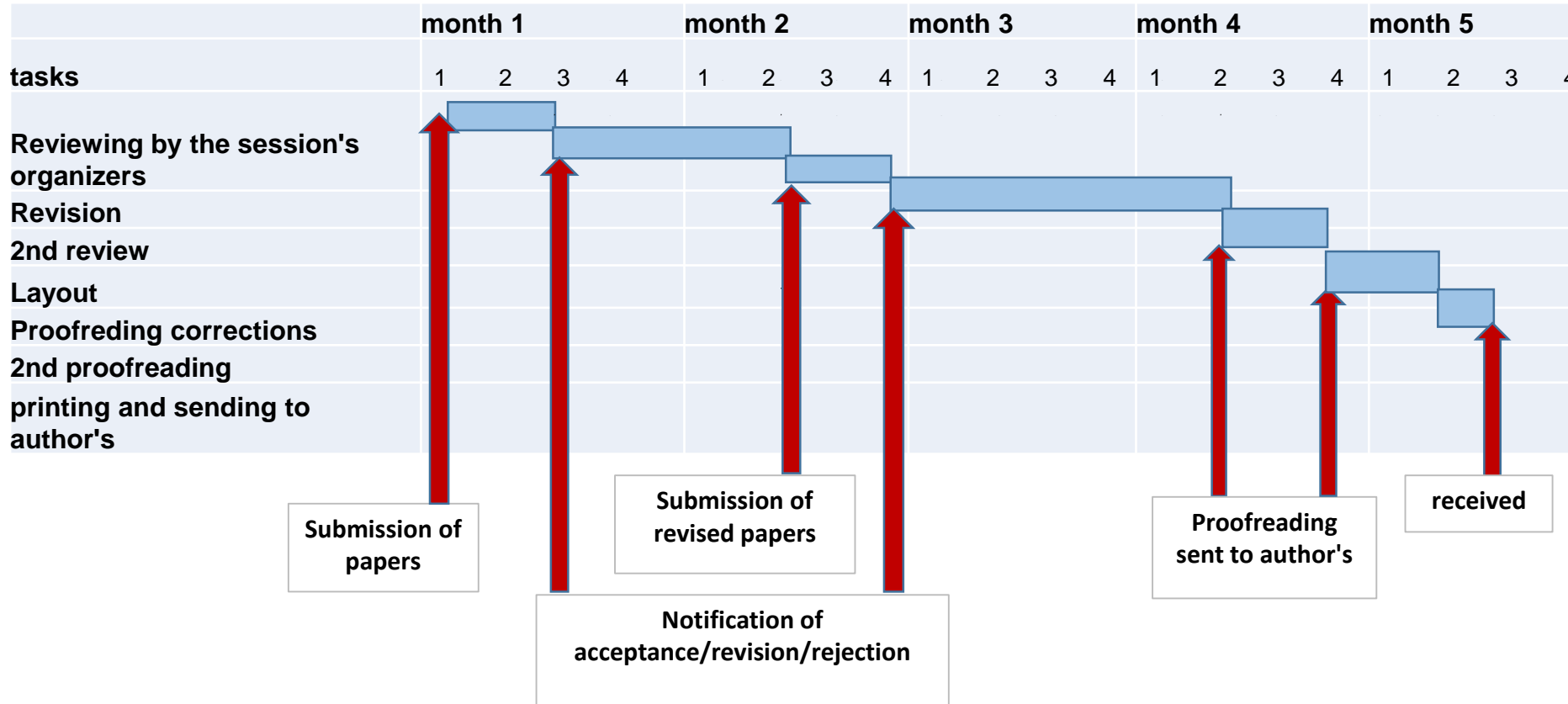
The layout

- Either the editor supports the layout, it then sets its conditions, or it is in charge of the publication team
- In this case, find a PAO and DAO technician in your institution whose working hours are booked well in advance or request a quote from a PAO company.
- Choose a CAD tool (Quark-XPress, Indesign)
- Choose and specify to the authors the format of the documents to be submitted (text in word or text fiel without formatting or style sheets, figures in Adobe EPS/ SVG format, scanned images with resolution and TIFF format, (no JPEG), minimal resolution 600 dpi. Specify the reference norm
- Request the delivery of the original files with a hard copy
- Provide a translator for abstracts

Plan the publication work

- Define the Publication Manager(s) (Field Manager for excavations)
- Regular exchanges and schedule's check, use a tool as Gantt chart
- Two to three synthesis meetings are required, one at the beginning and one at the end of the work
- The drafting of the synthesis is generally collective and is elaborated during working meetings where each author presents its results. A general discussion sets out the objectives of the synthesis, the essential points of which are defined and the drafting of which is entrusted to a small group which then disseminates the text to be amended. A new meeting may be necessary to agree on a final text
- The manuscript, if the editor's request for, has to be reviewed anonymously (peer-reviewed) or can be reviewed by an internal scientific committee of the project (a revised version can be asked)

timeline

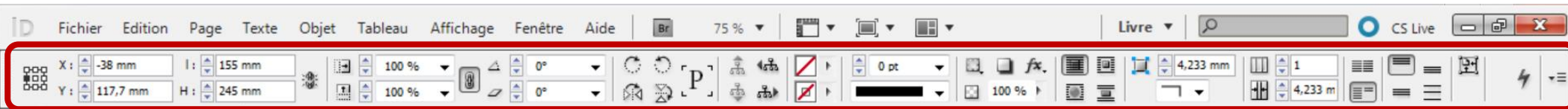


Example of schedule of conference proceedings with deposit, evaluation, possible corrections, then with two series of proofs given to the authors

Layout examples

layout in progress (Adobe In Design software)

format



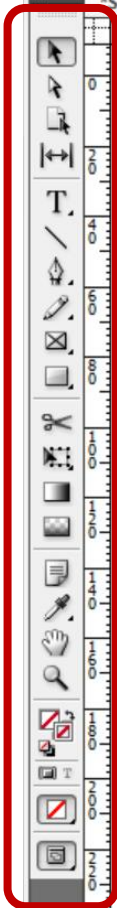
The top toolbar and format panel of Adobe InDesign. The format panel on the left shows dimensions: X: -38 mm, Y: 117.7 mm, I: 155 mm, H: 245 mm. The toolbar includes various tools for text, image, and layout, with a font size of 0 pt and a zoom level of 75%.

Link list for images

Page models

Recto-verso layout

tools



The left toolbar of Adobe InDesign, containing various tools for selection, drawing, and editing.

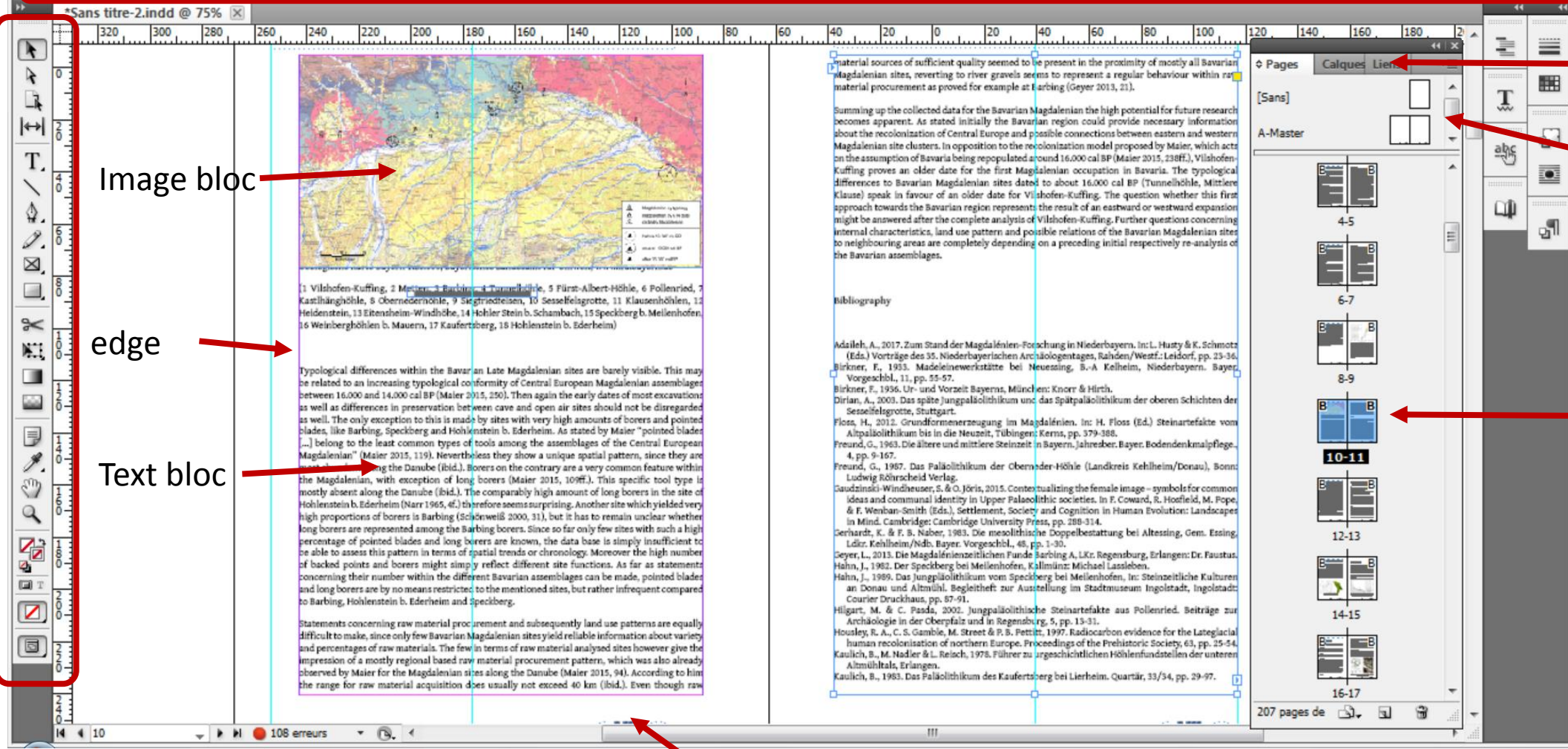
Image bloc

edge

Text bloc

Page number

Errors alert



The main workspace of Adobe InDesign showing a two-page spread. The left page features a map of the Danube region with a list of sites and a text block. The right page contains a bibliography. The interface includes a ruler at the top, a page model panel on the right, and a status bar at the bottom.

Guidelines



bibliographic recommendations

XVIIIth UISPP CONGRESS PROCEEDINGS - AUTHORS' INSTRUCTIONS

Please follow the Harvard citation style of formatting.

- To cite **journal article** please provide the following information:

Authors, date, title, journal titles, journal name, volume and issue, pages, website or doi if available.

Agustí, J. & Lordkipanidze, D., 2011. How “African” was the early human dispersal out of Africa? *Quaternary Science Reviews*, 30(11-12): 1338-1342. Available at: <http://linkinghub.elsevier.com/retrieve/pii/S0277379110001216> [Accessed November 5, 2012].

Carbonell, E. et al., 1999. Out of Africa: The Dispersal of the Earliest Technical Systems Reconsidered. *Journal of Anthropological Archaeology*, 18: 119-136.

- To cite a **book**, please provide the following information:

Authors, date, title, city, publisher.

Barber, M., Field, D. and Topping, P., 1999. *The Neolithic Flint Mines of England*. Swindon: English Heritage.

Gamble, C., 1993. *Timewalkers: the prehistory of global colonization*, Stroud: Alan Sutton.

- To cite a **section of an edited book** (including conference proceedings), please provide the following information:

Authors, date, title, editor(s), book title, city, publisher, pages

Saville, A., 2005. Prehistoric quarrying of a secondary flint source: evidence from north-east Scotland. In P. Topping and M. Lynott (eds.), *The Cultural Landscape of Prehistoric Mines*, Oxford: Oxbow Books: 1-13.

Castillo, F. Del & Barceló, J.A., 2009. Why Hunter and Gatherers did not Die More Often? Simulating Prehistoric Decision Making. In G. Earl et al., eds. *Archaeology in the Digital Era. Papers from the 40th Annual Conference on Computer Applications and Quantitative Methods in Archaeology (CAA), Southampton, 26-30 March 2012*. Amsterdam: Amsterdam University Press: 154–163.

- To cite a **website**, please provide the:

Author, date, title, website title, website address, accessed date.

Demoule, J.-P., 2017. L'archéologie pour les gens ?. *Blog Jean Paul Demoule*. Available at: <https://www.jeanpauldemoule.com/blog/> [Accessed June 5, 2018].

British Museum, 2014. Welcome to the British Museum. Available at: <http://www.britishmuseum.org> [Accessed June 5, 2018].

CAA Guidelines

Reference in bibliography

Book

FAMILY/SURNAME, Initials. (Year of publication - in brackets) *Book Title* - in italics or underlined. Series title and volume - if applicable. Edition - if not the first. Place of Publication: Publisher.

Two and more authors: FAMILY/SURNAME, Initials., FAMILY/SURNAME, Initials. and FAMILY/SURNAME, Initials. (Year of publication - in brackets) *Book Title* - in italics or underlined. Series title and volume - if applicable. Edition - if not the first. Place of Publication: Publisher.

Ex :EARL, G., SLY, T., CHRYSANTHI, A., MURRIETA-FLORES, P., PAPADOPOULOS, C., ROMANOWSKA, I. and WHEATLEY, D. (eds) (2013) *Archaeology in the Digital Era. Papers from the 40th Annual Conference of Computer Applications and Quantitative Methods in Archaeology (CAA), Southampton, 26-29 March 2012*, Amsterdam : Amsterdam University Press.

Chapter in a Book

FAMILY/SURNAME, Initials. (Year of publication - in brackets) Title of chapter/contribution. In: Author or Editor of Publication - Surname, Initials with (ed.) or (eds.) – in brackets, if relevant. *Book Title* - in italics or underlined. Series title and volume - if applicable. Edition - if not the first. Place of Publication: Publisher.

Journal article (printed)

FAMILY/SURNAME, Initials. (Publication year) Title of article. *Title of journal*. Volume number (Part number/month). p. page numbers of the article.

Ex :BLANKE, T., HEDGES, M. and DUNN, S. (2009) Arts and humanities e-science. Current practices and future challenges. *Future Generation Computer Systems*. 25 (4). p. 474-480.

Journal article (electronic/online)

FAMILY/SURNAME, Initials. (Publication year) Title of article. *Title of journal*. [Online] Name of Database the article is from if appropriate. Volume number (Part number/month). p. page numbers of the article. Available from: URL. [Accessed: date viewed in square].

Ex: SVENSSON, P. (2009) Humanities computing as digital humanities. *Digital Humanities Quarterly* 3 (3). Available from: <http://www.digitalhumanities.org/dhq/vol/3/3/000065/000065.html>. [Accessed: 14th July 2014].

Conference Paper

FAMILY/SURNAME, Initials or AUTHORIZING GROUP. (Year of publication - in brackets) Title of Paper. In: FAMILY/SURNAME, Initials. of author or editor of book (ed.) or (eds.). *Full Title of Conference*. Series title and numbers if applicable. Location and Date of Conference. Place of Publication: Publisher. Page numbers of paper.

Ex: HUGGETT, J. (2013) Disciplinary Issues: Challenging the Research and Practice of Computer Applications in Archaeology. In: EARL, G., SLY, T., CHRYSANTHI, A., MURRIETA-FLORES, P., PAPADOPOULOS, C., ROMANOWSKA, I. AND WHEATLEY, D. (eds) (2013) *Archaeology in the Digital Era. Papers from the 40th Annual Conference of Computer Applications and Quantitative Methods in Archaeology (CAA), Southampton, 26-29 March 2012*, Amsterdam : Amsterdam University Press. p. 13-24.

E-Book

FAMILY/SURNAME, Initials. (Publication year) *Book title - italicised or underlined*. [Online] Series title and volume if applicable. Edition. Place of publication: Publisher. Available from: URL. [Accessed: date].

Ex: BÖRNER, W., UHLIRZ, S. (2013) *Proceedings of the 17th International Conference on Cultural Heritage and New Technologies 2012 (CHNT 17, 2012)*. Vienn: Museen der Stadt Wien. Available from: <http://www.chnt.at/proceedings-chnt-17/>. [Accessed: 14th July 2014].

Website, web-document, computer program tutorial

Author of website FAMILY/SURNAME, Initials or WEBSITE name if no author is available. (Year - in brackets) *Title of website in italics or underlined*. Any numbers if necessary or available if website is part of a series. [Online] Available from: URL. [Accessed: date].

Ex: NATIONAL SCIENCE FOUNDATION. (2011) *Planning Archaeological Infrastructure for Integrative Science*. NSF Award Number 1202413 November 2011. [Online] <http://www.nsf.gov/awardsearch/showAward>. [Accessed: 14th July 2014].

PYTHON SOFTWARE FOUNDATION. (2014) Python 3.4.1 documentation. [Online] <https://docs.python.org/3/>. [Accessed: 14th July 2014].

Technical issues: image file format

➤ exchange formats: These formats are recognized both in reading and writing by all image editing software and viewers; they can be inserted into word processing.

- **TIFF or TIF [Tag(ed) Image File Format]:**

It allows to use many types of compression, with or without data loss: raw, PackBits, LZW, CCITT Fax 3 and 4, JPEG. TIFF is used in a wide variety of applications, from industrial scanners to digital cameras to printers. **The best for a publication**

- **JPG or JPEG [Joint Photographic Expert Group]:**

The JPEG is a lossy format, which therefore eliminates information, but one of the strengths of JPEG is that its compression ratio is adjustable. **The JPG is suitable for photographic images, and is commonly used on the internet but inappropriate for publications due to the lack of quality**

- **PNG [Portable Network Graphics]:**

Royalty-free digital image format, which was created to replace the proprietary GIF format, whose compression was subject to a patent.

- **BMP [Bitmap = point map]:**

Open digital image format developed by Microsoft and IBM. It is one of the simplest image formats to develop and use for programming. It is readable by almost all image viewers and editors. BMP images can be in 2 colors (1 bit) at 16.8 million colors (24 bits). it does not degrade the image and generally does not use compression, so it is very heavy.

2. Vector formats

EPS [Encapsulated Post-Script] an EPS file has 2 parts: a high Post-Script resolution for printing and a low resolution (peak) for

AI [Adobe Illustrator] specific format fo Illustrator software

SVG [Scalable Vector Graphics] is a specification of the World Wide Web Consortium. It is a file format based on a generic markup computer language to describe vector graphics sets.

WMF [Windows Metafile] or EMF [Enhanced Metafile]vector format used by windowsfra drawing software

Source : <http://fr.wikipedia.org>

Budget

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suivant vos textes, illustrations et tableaux fournis par vous

Papier : Maxisilk NE 250g/m² 460 x 640 mm LG - (250 gr/m²)

Papier : Maxisilk NE 130g/m² 460 x 640 mm LG - (130 gr/m²)

Impression : Couverture : impression en quadrichromie recto + laque mate, noir au verso
Contenu ; impression en quadrichromie recto/verso
Pelliculage mat ou brillant de la couverture au recto

Finition : Assemblage, mise à format et reliure dos carrés collés, colle PUR
Conditionnement en boîtes sur palettes (6)
Poids par volume : 1153 gr

Livraison : Livraison franco en un seul transport, une adresse à Paris

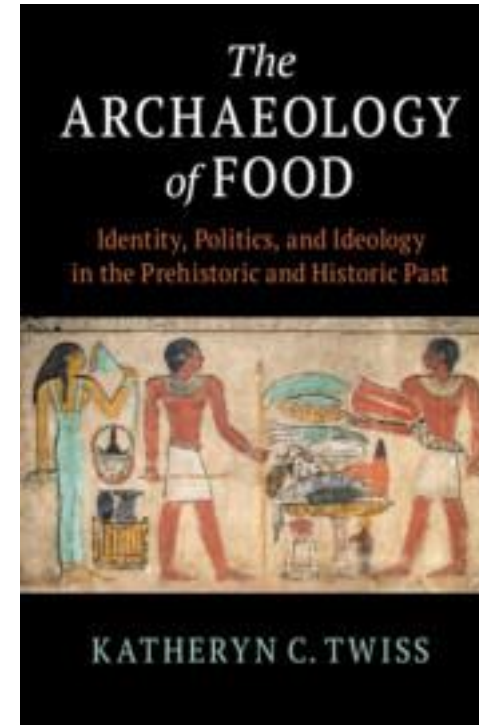
Translation: 0,20 €/word
Layout: 800 €/book with a special contract
100 volumes printed and shipped : 2200€/22€ per volume

Prix HTVA : % 2000 Ex. **25 847.00 €**

Exemples

Editors

- Institutions :
 - ✓ Heritage/Culture Ministry
 - ✓ Research institutions (Academy of Science, School of archaeology, universities)
 - ✓ Associations & learned societies
- Private editors
- author-owned editions



Cambridge
University Press



Religious Practice and Cultural Construction
of Animal Worship in Egypt
from the Early Dynastic to the New Kingdom

Ritual forms, material display,
historical development

Angelo Colonna



Archaeopress



To publish a paper in a journal

Editors instructions

- Editorial norms:
 - Text length, number of illustrations, formats
- Conditions for submission and publication
 - Original articles not published elsewhere – not plagiarized!
 - Waiting periods between submission and publication
 - Conditions for Evaluation (reviewing) Acceptance and Rejection
 - supplementary material: on line
- The copyright and broadcasting rights:
 - Images free of rights or that you own, otherwise you must have the rights purchased by the publisher (sometimes qlq hundreds of euros for a use)
 - No dissemination on the Internet for a minimum period (3 years in general) except on sites with restricted access (ex academia.edu)
 - Surrender of your rights to the publisher including possible adaptations (cinematographic and audiovisual!)

[Example instructions EJA:](#)

Other media: e-publication

e-publications

- To publish a site in electronic format needs a special writing and plan. Access to the data and to the logical argumentation can be provided

- Example of a monograph:

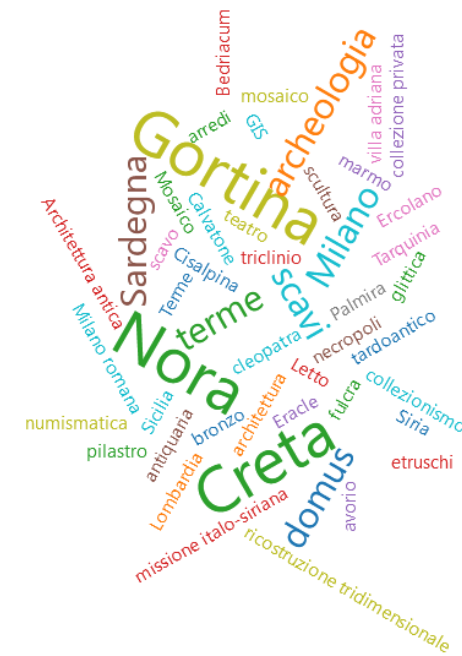
[https://www.fulcrum.org/epubs/bz60cw28v?locale=en#/6/2\[a01_Cover\]!/4/4/1:0](https://www.fulcrum.org/epubs/bz60cw28v?locale=en#/6/2[a01_Cover]!/4/4/1:0)

- <http://citeres.univ-tours.fr/cera2013/>
- Example of a journal: <http://www.thearkeotekjournal.org/>
- Example for interactive publication with 3D:

<https://www.darklab.lu.se/digital-collections/dynamic-excavation/kampinge/>

- Logicist publication:

<https://www.unicaen.fr/puc/rigny//accueil>



Consultation threw a keyword-could :
<https://riviste.unimi.it/index.php/lanx>

Digital interactive reports

The University of Lund has developed a web-based tool with 3D web information for the generation of digital interactive reports of archaeological excavation:

<https://www.darklab.lu.se/digital-collections/dynamic-excavation/kampinge/>

Find viewer :

https://models.darklab.lu.se/dynmcoll/Dynamic_Collections/single_viewer.html?obj=DC137_LUHMno_inv



The report-block of the excavation-node from trench 6, excavation campaign 2014, appears in the report tab. A) The archaeological features are described and their stratigraphic relations are shown in a 3D environment by clicking B) the “show” button. C) In the element’s box, the 3D models, contexts, and the findings’ localizations, which compose the narration of the block, are displayed; here users may also access the attached media, such as D) pictures and pdf files.

REPORT SCENE

SHOW->

Elements

Trench 6 model2

6001 phase 1

Finding 450 Finding 448 Finding 449

Photos

3D models

Layer 1 is clearly visible in the western part of Trench 6.

SHOW->

Elements

Trench 6 model4

6001 phase 3

Finding 4 Finding 5 Finding 6

Stone Age in Kämpinge

Navigation and control interface including a compass, a globe, and a directional pad.

The report-block of the excavation-node from trench 6, excavation campaign 2014, including A–B) the links to the external pages with C–D) the detailed 3D models of relevant artifacts.

In the text description of one report-block of the excavation-node from trench 6, excavation campaign 2014, are displayed the elements (models, context, and findings' locations) that make up the block, visualized through colored buttons that connect to information cards with A) their metadata, and the photos expandable through B) thumbnails. C) The link allows access to the 3D collection of D) the relevant findings retrieved during fieldwork.

Text description of findings:

...the artifacts that gave the impression to have been deposited together: a core axe in flint, a red amber pebble and a fragment of a whetstone in slate (see photo and 3D models of core axe 448 and 449).

Leif Brost, the head of the amber museum in Kämpinge inspected the amber pebble and concluded that it had been worked on one side and that it could be a preform for an amber bead or figurine. Since these artefacts could be regarded as personal objects it was concluded that the feature may belong to the remains of a deliberate deposition or grave. The soil in feature was less packed and had a darker brown colour and had the same properties as the soil in the plow layer above. It also contained a couple of larger stones that must have been deliberately positioned into the context. This layer was documented as Layer 1. The layer in the rest of the trench was lighter brown and was denoted Layer 2. As the excavation continued the initial feature in the eastern part of the trench grew in size until it covered the complete eastern part of the Trench. It was then considered to have been cut into Layer 2—the layer that appeared underneath the plow layer in the rest of Trench 6 (see drawing of profile).

SHOW->

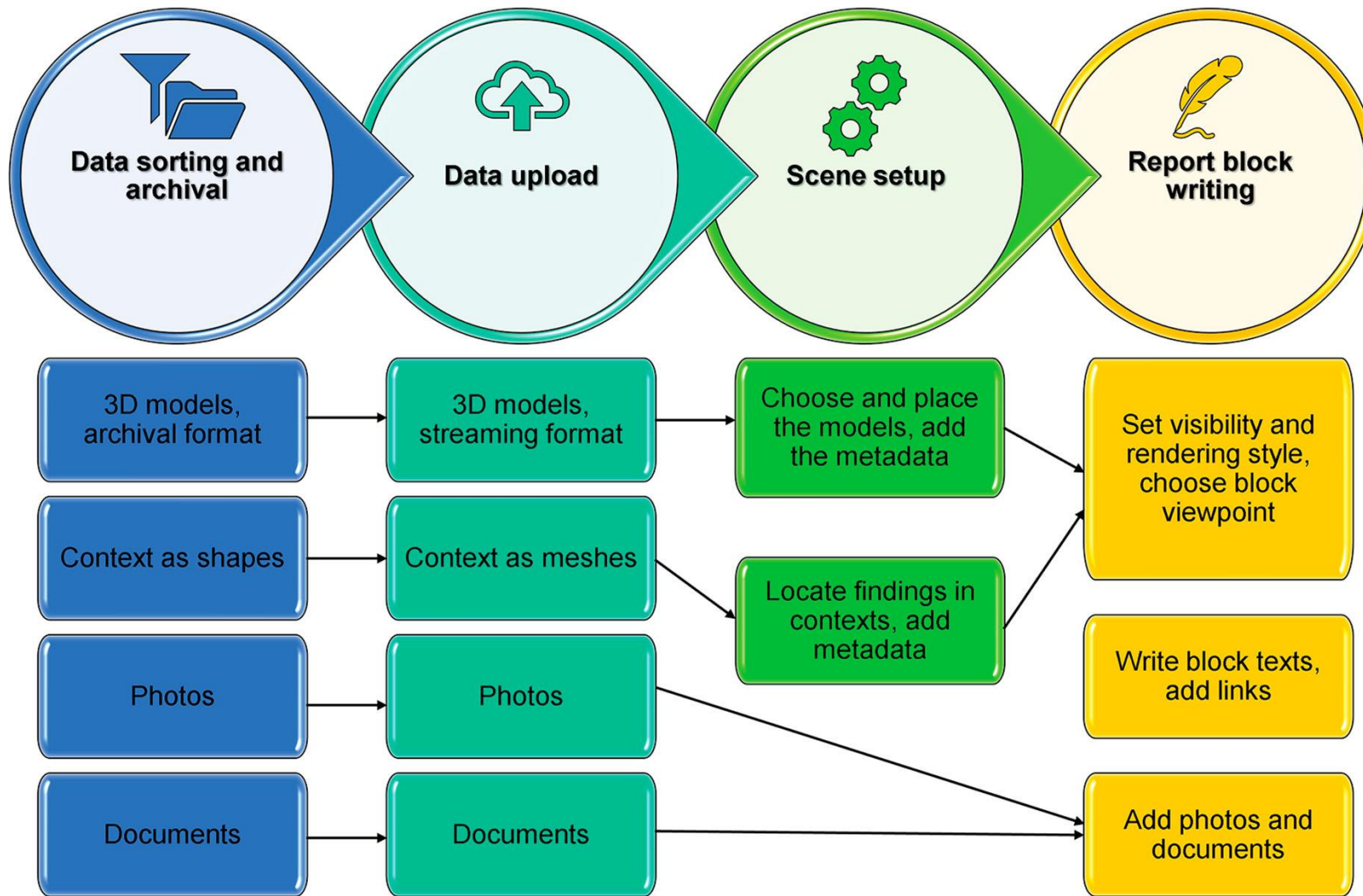
Elements

Trench 6 model2

6001 phase 1

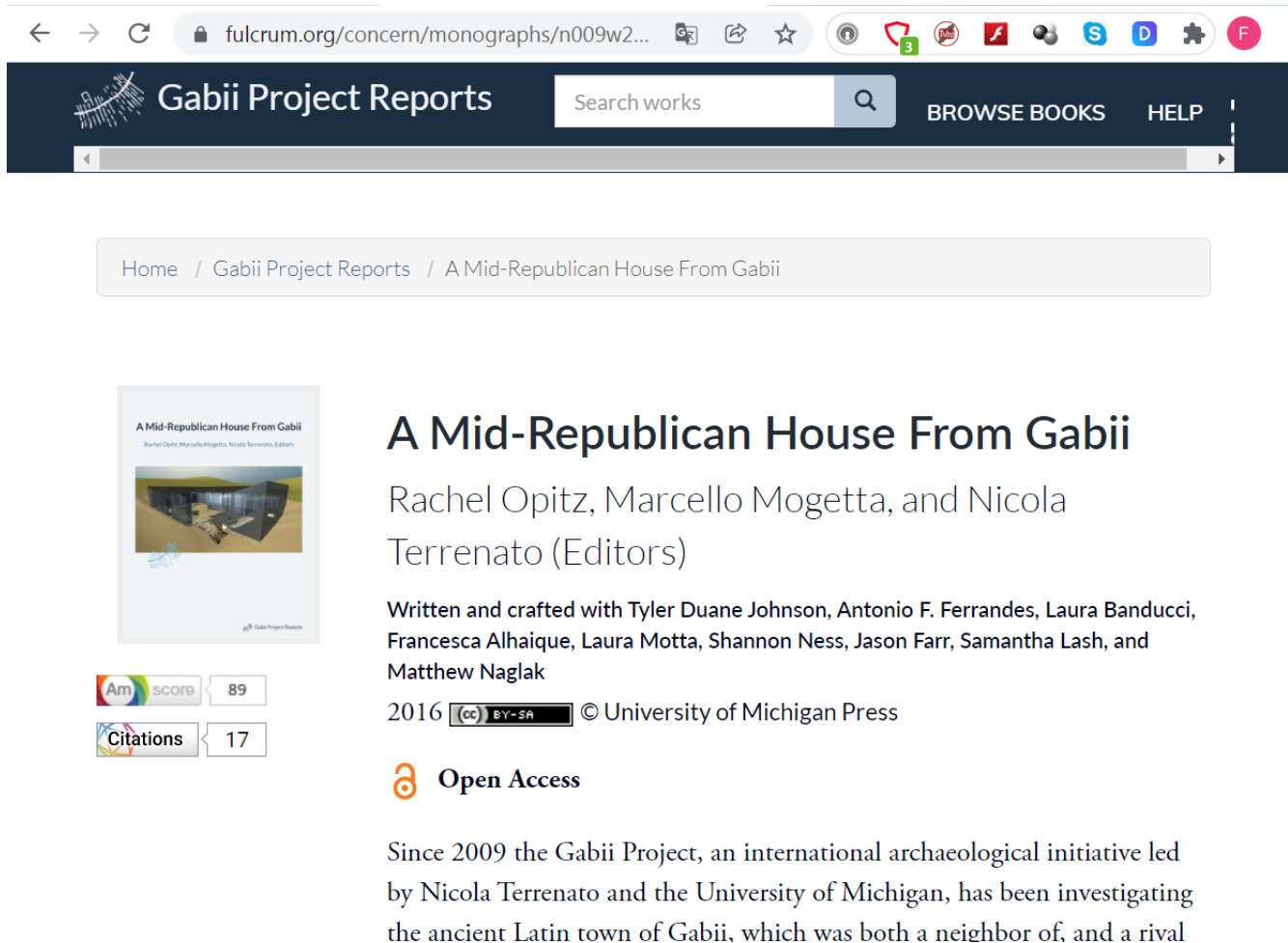
Finding 450 Finding 448 Finding 449

3D model viewer interface showing two artifacts: 'Core axe code 448' and 'Find 449 code 449'. The interface includes navigation controls, a compass, and a 'Screenshot' button.



workflow of the Interactive Reporting System

An alternate e-publication



fulcrum.org/concern/monographs/n009w2...

Gabii Project Reports

Search works


BROWSE BOOKS HELP


Home / Gabii Project Reports / A Mid-Republican House From Gabii

A Mid-Republican House From Gabii

Rachel Opitz, Marcello Mogetta, and Nicola Terrenato (Editors)

Written and crafted with Tyler Duane Johnson, Antonio F. Ferrandes, Laura Banducci, Francesca Alhaique, Laura Motta, Shannon Ness, Jason Farr, Samantha Lash, and Matthew Naglak

2016  © University of Michigan Press

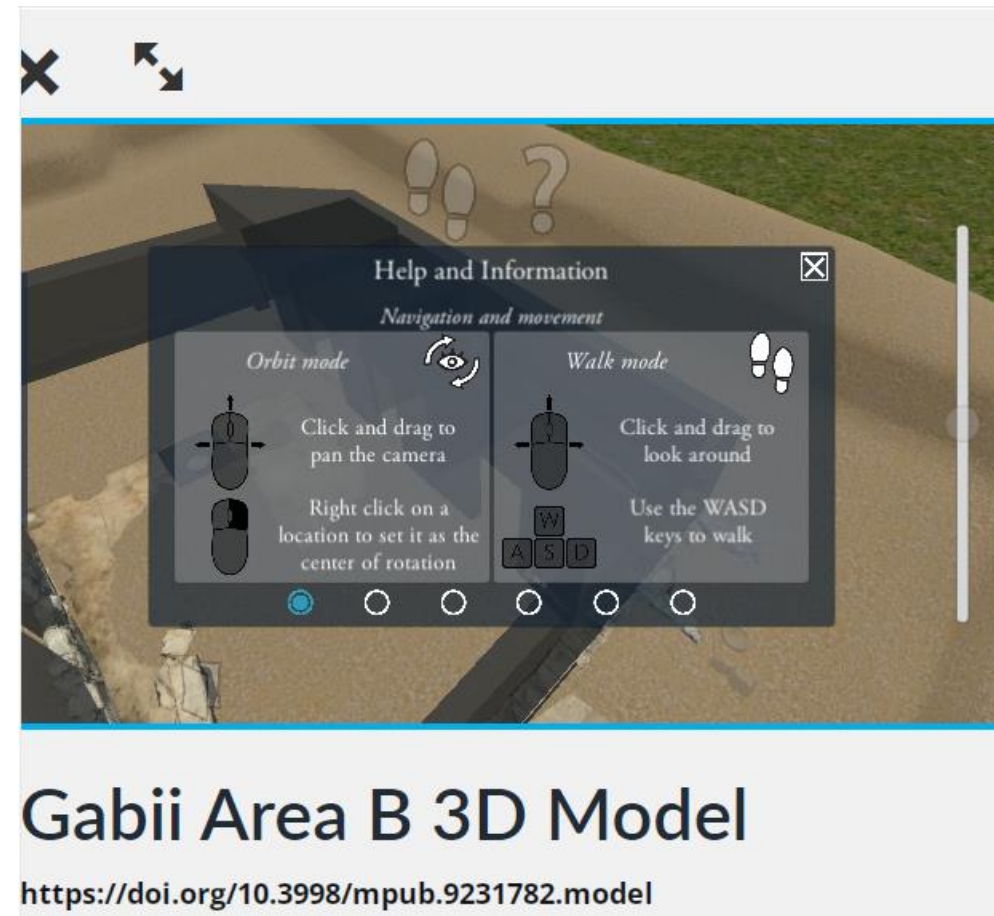
 **Open Access**

Since 2009 the Gabii Project, an international archaeological initiative led by Nicola Terrenato and the University of Michigan, has been investigating the ancient Latin town of Gabii, which was both a neighbor of, and a rival

Am score 89

Citations 17

- To avoid the linear development of a traditional report (XML)
- To include images and 3D models into the publication
- To include access to archives







Gabii Area B 3D Model

<https://doi.org/10.3998/mpub.9231782.model>

Help and Information

Navigation and movement

Orbit mode	Walk mode
 Click and drag to pan the camera	 Click and drag to look around
 Right click on a location to set it as the center of rotation	 Use the WASD keys to walk

Opitz, Rachel, Marcello Mogetta, and Nicola Terrenato. *A Mid-Republican House From Gabii*. E-book, Ann Arbor, MI: University of Michigan Press, 2016, <https://doi.org/10.3998/mpub.9231782>.



Explore the evidence

Specialist Reports

Download 15 of the T5 Volume 1 [specialist reports](#) (zipped PDF files, 2.4MB), or [view them online](#) on [Scribd](#).

Download 24 of the T5 Volume 2 [specialist reports](#) (zipped PDF files, 84MB).

Heathrow Airport

[Heathrow](#)
[Official Website](#)

The Archaeologists

[Wessex Archaeology](#)
[Oxford Archaeology](#)

Framework Archaeology

[Framework Home](#)

Dig Deeper – Data Downloads



Quick Start

There are two files you need to download.

[Download the Framework Free Viewer](#) – our free data viewer (4.5MB)

[Download the T5 Volume 2 data](#) to load into the Freeviewer (724MB)

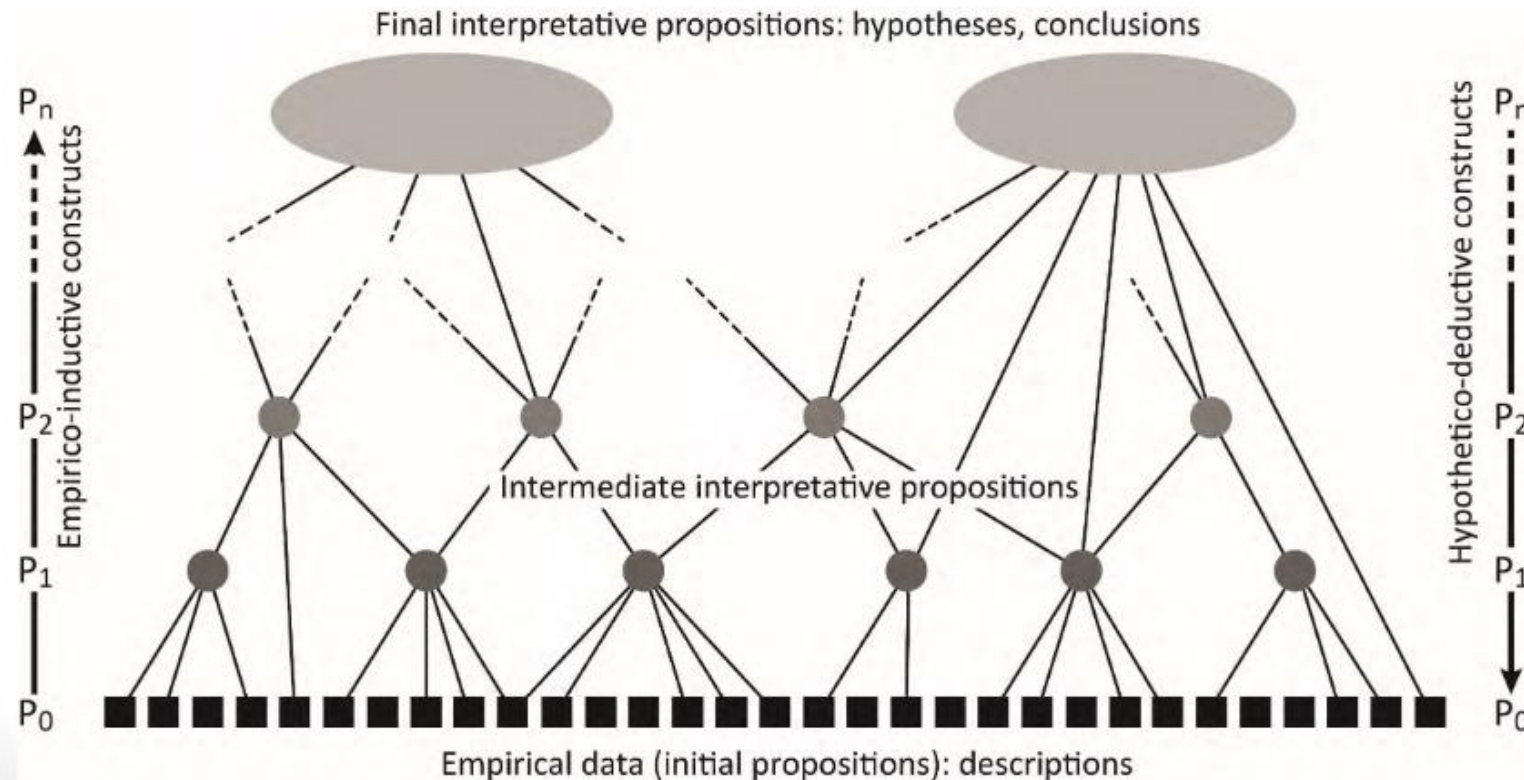
If you would like to delve right down to the excavation data, you can

- **Archaeology at Heathrow Terminal 5 publication**
<https://framearch.co.uk/t5/>

Other example : THE AMERICAN SCHOOL OF CLASSICAL STUDIES AT ATHENS <http://www.agathe.gr/>

critique of reasoning and interpretations in archaeological publications

- The argumentation is a series of inference operations from the initial propositions $\{P_0\}$ (basic data) to the final interpretative propositions $\{P_n\}$
- The inference rules are expressed as “If P_1 , then P_2 ”



- Rewrite a publication in the logiscit form: the contribution of Jean-Claude Gardin
- <http://www.thearkeotekjournal.org/>
- See Gardin, 1981. Une archéologie théorique, Paris
- GALLAY A., 1989. Logicism: a French view of archaeological theory founded in computational perspective, *Antiquity*, 63, n° 238, p. 27-39

empirico-inductive →

Excavation

Field → **Recording** → **Phasing** → **Interpretation**

Stratigraphic Unit
Features
Walls
Burials
Structures

Spatio-functional
et spatio-temporal
groupings

- function
- time
- morphology

Selection

Formalization

Observation data
- physical (materials)
- geometric (shape or size of remains)
- semiotic (ornaments, inscriptions...)
- relative chronology (stratigraphic relationships)

{P0}

{Pi}

{Pn}

Inference
operation
- function
- time
- morphology

Comparison
data

Reference
data

External
sources

External
sources

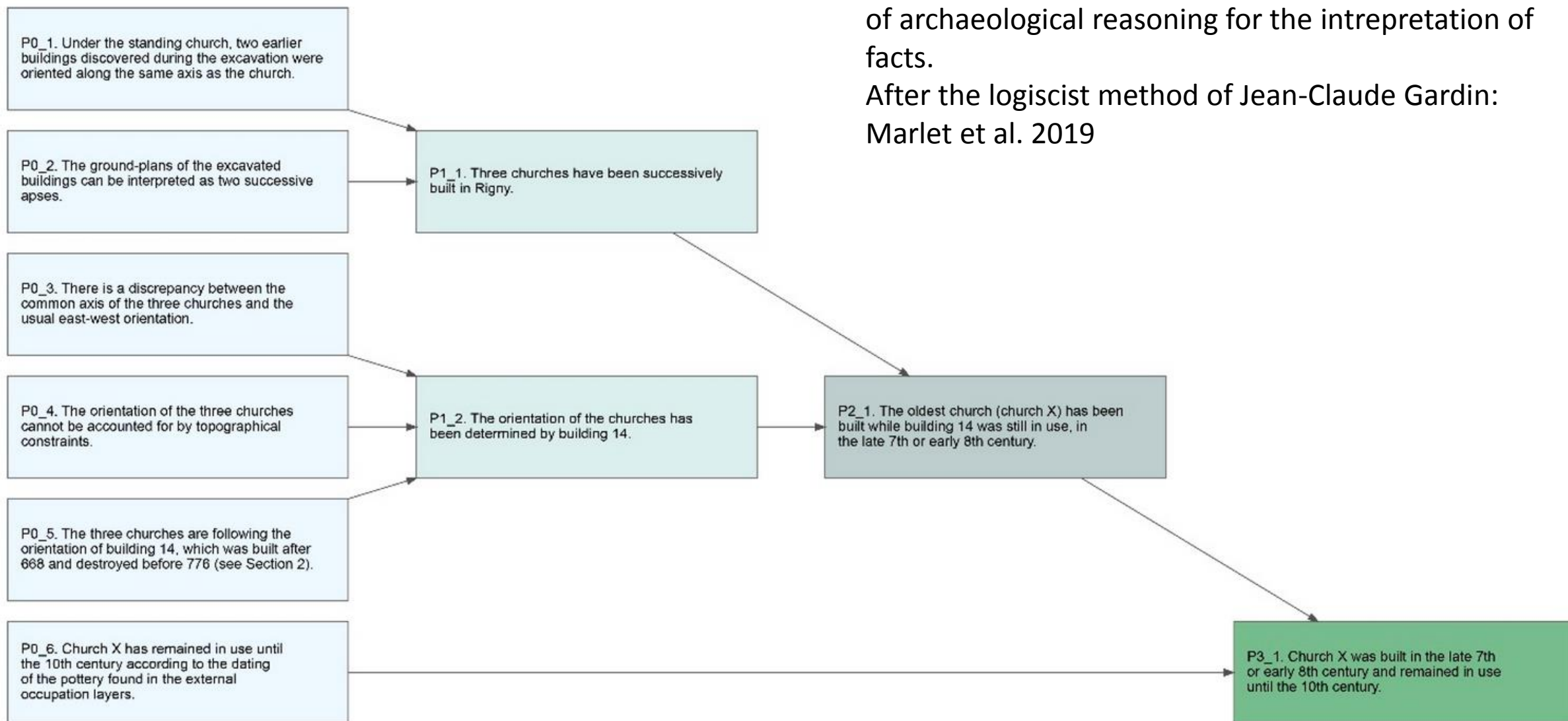
← hypothetico-deductive

Material correlates ← → Use and practice

- A tentative of laying out and formalising reasoning:

- MARLET O, ZADORA-RIO E, BUARD P-Y, MARKHOFF B, RODIER X. 2019. The Archaeological Excavation Report of Rigny: An Example of an Interoperable Logician Publication. *Heritage*, 2(1), p.761-773.

<https://doi.org/10.3390/heritage2010049>



formal description and decomposition of the stages of archaeological reasoning for the interpretation of facts.

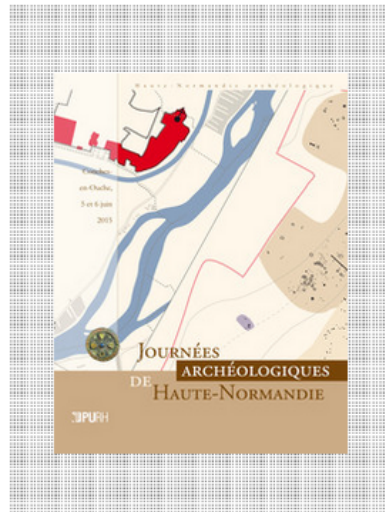
After the logiscist method of Jean-Claude Gardin: Marlet et al. 2019

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Jean-Paul Ollivier (dir.)

Nathalie Bolo et Florence Carré (éd.)

Journées archéologiques de Normandie

...

Ce volume réunit les actes des ultimes Journées archéologiques de Haute-Normandie avant la création de la région Normandie, qui se sont déroulés les 5 et 6 juin 2015 à Conches-en-Ouche (Eure). Chaque année, cet événement régional permet la rencontre des acteurs de la recherche et la restitution au public de son actualité dans l'Eure et en Seine-Maritime. Les dix-sept articles de l'ouvrage démontrent la vitalité de la discipline dans ces deux départements.

...

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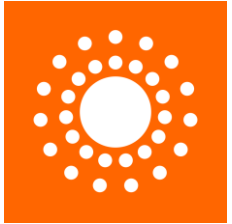
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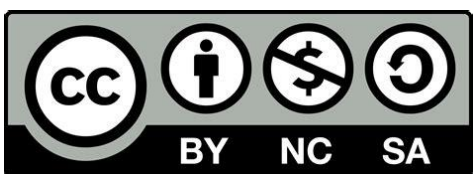
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Pour un usage raisonné de la 3D en archéologie

1

Dossier La 3D en archéologie

Pour un usage raisonné de la 3D
en archéologie

Robert Vergnieux* & François Giligny**

L'usage de la 3D en archéologie constitue une vraie révolution, qui modifie à la fois nos habitudes de travail mais aussi notre façon de considérer les vestiges archéologiques et nos objets d'étude. Cependant, la 3D s'inscrit également dans une tendance ancienne d'intégration de nouvelles technologies et d'adoption d'innovations que l'archéologie pratique depuis qu'elle a commencé à se constituer en discipline scientifique dès la fin du XIX^e siècle. En ce sens, elle est donc à la fois une vieille et une nouvelle frontière.

Quels objectifs ?

Comme pour toute innovation, une réflexion sur les apports ou les mirages de la 3D en archéologie s'impose. Elle nécessite tout d'abord de prendre en compte les objectifs que son usage permet d'atteindre et les besoins auxquels elle répond : s'agit-il de besoins nouveaux ou d'une manière de faire autrement ce que l'on faisait déjà depuis longtemps à l'aide d'autres méthodes ? La 3D autorise-t-elle une plus grande précision ou correspond-elle simplement à un changement de paradigme et de perspective ? Ses objectifs sont-ils de progresser dans l'analyse et l'interprétation des faits archéologiques ou seulement de représenter visuellement et virtuellement ce que l'on se représentait déjà mentalement ou en 2D ?

La lecture des applications et études de cas diffusées depuis environ une vingtaine d'années dans ce domaine fait ressortir quatre types de besoins principaux. Tout d'abord, la visualisation et la manipulation des objets : approcher la topographie d'un site terrestre ou sous-marin, se déplacer dans un environnement très contraint comme une grotte, une mine ou un aqueduc, réaliser et contrôler le relevé tridimensionnel d'un décapage archéologique, manipuler un objet volumineux ou trop fragile, voir le contenu d'une urne cinéraire ou l'organisation d'un dépôt d'objets avant de le fouiller, consulter à distance des collections, voilà quelques finalités de nombreuses applications de la 3D en archéologie.

Un second type de besoin concerne le traitement et l'analyse des données, qui apportent des réponses à des questions précises mais font aussi émerger de nouvelles questions. Ces analyses peuvent s'attacher à mesurer un objet, calculer sa masse, identifier les parties manquantes ou les vides, calculer la répartition des forces qui permettent de l'animer, procéder à des remontages virtuels d'artefacts ou à une anastylose, identifier les contours des enlèvements sur un objet lithique, etc.

* Fondateur d'Archéovision
et d'Archéotransfert,
vergnieux@yahoo.fr

** Professeur des universités,
UMa Trajectoires, CNRS,
Paris 1 Panthéon-Sorbonne,
Maison Archéologie & Ethnologie
René-Ginouès, Nanterre,
francois.giligny@univ-paris1.fr

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Pour un usage raisonné de la 3D en archéologie

Robert Vergnieux et François Giligny

Paragraphe
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Topographical
exploration



Chronological
exploration



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